11.0 CLAIMS

What is claimed:

1. A cleaning and impregnation process for tissue implants which comprises subjecting the entire tissue implant to high intensity audible sound in the range of 20 to 20,000 cycles per second in a treatment chamber filled with liquids, wherein said tissue implant is selected from a group consisting of autograft tissue, allograft tissue, xenograft tissue, tissue from a compound fracture or any combination thereof.

2. The process of claim 1 where the audible acoustic energy is augmented by ultrasonic sound in the frequency range of 20,000 to 40,000 cycles per second

3. The process of claim 1, where said treatment chamber has attached to it two higher frequency sound producing devices which, between them, produce an audible tartini tone sound, said audible tartini tone sound being the frequency obtained by subtracting one device's higher frequency from the other device's higher frequency.

4. The process of claim 1, where the liquids utilized are selected from a group consisting of ethanol, acetone, isopropyl alcohol, dimethyl sulfoxide, esters, ethers, ketones, diethanolamine, water, detergents, fatty acid esters, anionic surfactants, cationic surfactants, non-ionic surfactants, disinfectants, hydrogen peroxide, sodium hypochlorite, polyvinyl pyrrolidine iodine, reducing agents, guanidine hydrochloride, basic salts, sodium acetate, sodium bicarbonate, sodium carbonate, potassium carbonate, acids, acetic acid, ascorbic acid, hydrochloric acid, phosphoric acid, formic acid, antiviral agents, bases, calcium hydroxide, sodium hydroxide, antioxidants, vitamins, stem cells, blood plasma, serum, blood, DNA dehydrogenase and RNA dehydrogenase, enzymes, antibiotics, biologics, growth factors, proteins and any mixture of these.

5. The process of claim 1, where acidic liquids are alternated with basic liquids during the process.

6. A cleaning and impregnation process for tissue implants which comprises subjecting the entire tissue implant to harmonically intensified audible sound in the range of 20 to 20,000 cycles per second in a treatment chamber filled with liquids, wherein said tissue implant is selected from a group consisting of autograft tissue, allograft tissue, xenograft tissue, tissue from a compound fracture or any combination thereof, and where the walls of said treatment chamber are vibrated at a frequency such as to induce resonant harmonic oscillations in a liquid column in the treatment chamber at the first harmonic of the liquid column.

7. The process of claim 6, where the audible sound is between 600 and 6,000 cycles per second

8. The process of claim 6, where said treatment chamber has attached to it two higher frequency sound producing devices which, between them, produce an audible tartini tone sound, said audible tartini tone sound being the frequency obtained by subtracting one device's higher frequency from the other device's higher frequency and said tartini tone being the first harmonic of the column of liquid in said treatment chamber.

9. The process of claim 6 where the audible acoustic energy is augmented by ultrasonic sound in the frequency range of 20,000 to 40,000 cycles per second.

10. The process of claim 6, where the liquids utilized are selected from a group consisting of ethanol, acetone, isopropyl alcohol, dimethyl sulfoxide, esters, ethers, ketones, diethanolamine, water, detergents, fatty acid esters, anionic

surfactants, cationic surfactants, non-ionic surfactants, disinfectants, hydrogen peroxide, sodium hypochlorite, polyvinyl pyrrolidine iodine, reducing agents, guanidine hydrochloride, basic salts, sodium acetate, sodium bicarbonate, sodium carbonate, potassium carbonate, acids, acetic acid, ascorbic acid, hydrochloric acid, phosphoric acid, formic acid, antiviral agents, bases, calcium hydroxide, sodium hydroxide, antioxidants, vitamins, stem cells, blood plasma, serum, blood, DNA dehydrogenase and RNA dehydrogenase, enzymes, antibiotics, biologics, growth factors, proteins and any mixture of these.

11. A method of partially sterilizing tissues for implanting where the tissue is treated in 50 to 100% pure oxygen at pressures of 2 to 20 atmospheres and temperatures of 2 to 10 degrees Celsius for more than one hour.